



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

STRABO i. 4. 6

6. Παραμυθούμενος δ' ἐπὶ πλέον, ὅτι κατὰ φύσιν ἐστὶ τὸ ἀπὸ ἀνατολῆς ἐπὶ δύσιν διάστημα μείζον λέγειν, κατὰ φύσιν φησὶν εἶναι ἀπὸ τῆς ἕως πρὸς τὴν ἐσπέραν μακροτέραν εἶναι τὴν οἰκουμένην, καθάπερ εἰρήκαμεν ὡς οἱ μαθηματικοί, φησί, κύκλον συνάπτειν, συμβάλλουσιν αὐτὴν ἐαντῇ ὥστ', εἰ μὴ τὸ μέγεθος τοῦ Ἀτλαντικοῦ πελάγους ἐκώλυε, κὰν πλεῖν ἡμᾶς ἐκ τῆς Ἰβηρίας εἰς τὴν Ἰνδικὴν διὰ τοῦ αὐτοῦ παραλλήλου, τὸ λοιπὸν μέρος παρὰ τὸ λεχθὲν διάστημα ὑπὲρ τὸ τρίτον μέρος ὃν τοῦ ὅλου κύκλου, εἴπερ ὁ δι' Ἀθηνῶν ἐλάττων ἐστὶν εἰκοσι μυριάδων, ὅπου πεποιήμεθα τὸν εἰρημέον σταδιασμὸν ἀπὸ τῆς Ἰνδικῆς εἰς τὴν Ἰβηρίαν. οὐδὲ ταῦτα οὖν εἰ λέγει. οὗτος γὰρ ὁ λόγος περὶ μὲν τῆς εὐκράτου καὶ καθ' ἡμᾶς ζώνης λέγοιτ' ἂν κατὰ τοὺς μαθηματικούς, ἥς μέρος ἡ οἰκουμένη ἐστί, περὶ δὲ τῆς οἰκουμένης—καλοῦμεν γὰρ οἰκουμένην ἣν οἰκοῦμεν καὶ γνωρίζομεν· ἐνδέχεται δὲ ἐν τῇ αὐτῇ εὐκράτῃ ζώνῃ καὶ δύο οἰκουμένας εἶναι ἥ καὶ πλείους, καὶ μάλιστα ἐγγὺς τοῦ δι' Ἀθηνῶν κύκλου τοῦ διὰ τοῦ Ἀτλαντικοῦ πελάγους γραφομένου. πάλιν δὲ ἐπιμένων τῇ περὶ τοῦ σφαιροειδῆ τὴν γῆν εἶναι ἀποδείξει τῆς αὐτῆς ἐπιτιμήσεως ἂν τυγχάνοι. ὡς δ' αὐτῶς καὶ πρὸς τὸν Ὅμηρον οὐ παύεται περὶ τῶν αὐτῶν διαφερόμενος.¹

In this passage the commentators and translators assume lacunae, though there is no sign of a lacuna in the manuscripts. The emendations run all the way from brief ones to rather extensive exercises in Greek prose composition; and the German, French, and English translators do similar violence to the original in their several versions.

Corais inserts καί before ὡς οἱ μαθηματικοί; Kramer indicates a large lacuna at that point, and conjectures as follows: τὴν γὰρ εὐκρατον καὶ καθ' ἡμᾶς ζώνην μακροτέραν εἶναι καὶ αὐτὴν καί; Groskurd conjectures the following before καθάπερ εἰρήκαμεν: μέρος γὰρ εἶναι τῆς εὐκράτου, ἣ περιτρέπει ἅπασαν τὴν γῆν, τὸ λοιπὸν δὲ τὴν ἕως θάλατταν καὶ ταύτην σύρρουν εἶναι, and he adopts the καί of Corais; Forbiger, Müller-Dübner, Tardieu, and Meineke assume a lacuna before ὡς, as did Kramer. Corais and the others read φασί for φησί after μαθηματικοί—a correction made by Siebenkees from a conjecture of Casaubon.

Again, Casaubon, Siebenkees, and Groskurd assume a still more serious lacuna after Ἰβηρίαν. Groskurd conjectures (and translates) the following: ὥσπερ οὖν ὅλη ἡ εὐκρατος κατὰ μήκος ἀπὸ τῆς ἕως πρὸς τὴν ἐσπέραν πολὺ μείζων τοῦ πλάτους ἐστί, οὕτω κατὰ φύσιν καὶ τὴν οἰκουμένην, τὴν τε καθ' ἡμᾶς καὶ εἰ τινες ἄλλαι ἴσως εἰσίν, ὡς μέρος οὖσαν ὅλου τοῦ κύκλου, μακροτέραν εἶναι δεῖν ἀπὸ τῆς ἀνατολῆς ἐπὶ δύσιν.

Still again, all but Corais assume a lacuna after οἰκουμένης, Casaubon conjecturing οὐκέτι, Kramer, οὐκ ἐξ ἴσης, and Groskurd, χωρὶς τοῦ μὴ ἀκολουθεῖν, ὅτι καὶ αὕτη μακροτέρα ἐστί, τῷ γεωγράφῳ γε ἀποχρῆ τὸ σχῆμα καὶ μέγεθος εἰπεῖν, συμπαραδελούντι καὶ τὸ ποῖόν τι καὶ πόσον μέρος τῆς ὅλης γῆς ἐστί.

¹ Cf. the writer's text and translation, *The Geography of Strabo* (London, 1916), I, 240-43 ("Loeb Classical Library").

Corais, however, would partially solve the difficulty by merely casting suspicion upon the *δέ* after *ἐνδέχεται*.

The trouble in the first instance cited has been brought about apparently by a misunderstanding as to the subject of *εἰρήκαμεν*. Strabo is not referring to himself as the subject, and hence it will not be necessary to search for some previous statement of his, and then, after failing to find such a statement, to insert one to suit the requirements. The verb is a quotation from Eratosthenes, and Eratosthenes is the subject, as is surely the case with *πεποιήμεθα* below; that is, Eratosthenes is quoted by Strabo as repeating a mathematical statement he had already made before. Strabo often taunts Eratosthenes with branching off into matters foreign to the subject immediately in hand, and with repeating himself (cf. § 1 above and the concluding sentences of the present paragraph). It suffices, then, to assume that *καί* has fallen out before *καθάπερ*, either through misunderstanding or inadvertence. Then, too, *φησί* should stand without emendation, since it is needed in order to account nicely for the subject of *εἰρήκαμεν*; and *φασί* is not necessary at all—in fact, Strabo often omits the verb after *ὥς* (e.g., i. 2. 27).

It is purely gratuitous to assume a lacuna after *Ἰβηρίαν*. In the whole paragraph Strabo is dismissing as rapidly as possible, even abruptly, what he regards as Eratosthenes' side issues, and surely he would avoid laying himself open to the charge he has brought against Eratosthenes.

As regards the obvious break after *οἰκουμένης*, it seems to be a perfectly natural anacolouthon, which forms a suitable climax to Strabo's impatience. This impatience, or captiousness, stands out from the first word of the paragraph (*παραμυθούμενος*); and the last two sentences show the same thing. In short, Strabo does not object to an elaborate discussion of the temperate zone, or of a theoretical "inhabited world"—he himself may discuss the same subject at the proper time—but when a man professes to apply the principles of mathematics to the inhabited world he must discuss its dimensions, etc., in the practical sense of the term "inhabited world." But Eratosthenes' discussion is professedly theoretical; and his emphasis is upon *κατὰ φύσιν*; and theoretically he was right (compare Aristotle's discussion of the point, *Meteorologica* ii. 5. 13) in making the *natural* limits of the breadth of the inhabited world the frigid and torrid zones, and in making the *natural* limits of the length of it lie in a parallel of latitude. The dimensions of the known inhabited world were, to Eratosthenes, 38,000 by 77,800 stadia; but theoretically, 38,000 by about 200,000 stadia.

There is one other moot point in our passage—in the clause *εἴπερ . . . μυριάδων*. Groskurd inserts *οὐκ* before *ἐλάττων* and emends *εἴπερ* to *καίπερ*; Forbiger retains *εἴπερ* but accepts *οὐκ*, and so Meineke.

If we assume that Eratosthenes' distance from the equator to the southern limit of the inhabited world is 8,300 stadia—and this is obviously the assumption of C. Müller, Groskurd, and Forbiger when they place the parallel of

Athens at 25,450 stadia north of the equator—then, by trigonometry, the text here contains an inaccurate statement. Counting Eratosthenes' degree at 700 stadia, the parallel in question would thus lie at $36^{\circ} 21' 25\frac{1}{2}''$ latitude, and the circumference of the parallel would figure out to be 202,945 stadia. But among the many meridian distances ascribed by Strabo to Eratosthenes, there is no reference to Eratosthenes' distance from the equator to the southern limit of the inhabited world; and none of the ancient astronomical writers, I believe, quote Eratosthenes on this point, though Ptolemy makes a statement from which one might compute that Eratosthenes' distance in this case was 8,300. Ptolemy says: "[The arc between the tropics is between $47\frac{3}{8}^{\circ}$ and $47\frac{3}{4}^{\circ}$], δι' οὗ συνάγεται σχεδὸν ὁ αὐτὸς λόγος τῷ τοῦ Ἐρατοσθένους ᾧ καὶ Ἱππαρχος συνεκρήσατο. γίνεται γὰρ τοιούτων ἡ μεταξὺ τῶν τροπικῶν ἰσότης, οἷον ἐστὶν ὁ μεσημβρινὸς πᾶσι." Theon in commenting on this passage of Ptolemy rightly censures Hipparchus because he followed Eratosthenes in regarding the arc as equal in length to $\frac{1}{3}$ of the equator," ὥς ἀκριβῶς εἰλημμένῃ. It seems rash, then, to take a rough estimate about one thing, apply it rigorously to another thing, and then, when a comparatively slight discrepancy is found, alter the text accordingly. In fact, most of Eratosthenes' work was professedly on large lines: for practical purposes he regards the Taurus Range and the Mediterranean Sea as being in one line; the parallel that passes through Rhodes (whether island or city he does not say) also passes through Athens, though he admits that Athens is 400 stadia north of Rhodes (ii. 1. 35); he regards Meroë, Syene, Alexandria, and Rhodes as being upon the same meridian—though, of course, the actual distances between them would be represented by the hypotenuses of right-angled triangles; and both Hipparchus and Strabo exposed glaring errors of his in numbers of specific cases (see, e.g., ii. 1. 40). Again, it is not unlikely that in the case in hand he applied a system of corrections sufficient to throw his result below 200,000; or it may be that he was echoing a current belief among the mathematicians (as εἴπερ might imply).

As to the emendations that have been made, Groskurd is at least consistent, in that he not only inserts οὐκ, but also emends εἴπερ to καίπερ. Thus the sense is good. But merely to insert οὐκ does not help matters; for there would be no point in saying that 77,800 stadia (Eratosthenes' length of the inhabited world) is more than a third of the whole parallel, "if it be true that that circle is not less than 200,000 stadia." If the only condition be that it is not less than 200,000, then it might be far more than three times 77,800!

Left as it stands, the clause makes good sense; and the fact that Eratosthenes leaves himself a considerable margin to spare, in his 77,800 stadia, only strengthens his comparison.

HORACE L. JONES